

Claims

1. A wireless portable game terminal comprising:
 - a radio transceiver configured to transfer speech and game data through a radio connection to a telecommunication system;
 - a loudspeaker configured to reproduce audio;
 - a microphone configured to capture speech of a user of the wireless portable game terminal; and
 - a processing unit coupled to the radio transceiver, the loudspeaker and the microphone configured to process the game data, to transfer the game data to and from another game terminal or a game server through the radio connection, to receive captured speech of another user through the radio connection, to output audio part of the game data and the captured speech of the other user through the loudspeaker, to capture speech of an user with the microphone, and to transfer the captured speech of the user to another game terminal or to a game server through the radio connection.
2. The wireless portable game terminal of claim 1, wherein the processing unit and the transceiver are further configured to transfer the game data as in-band signaling in a speech channel of the radio connection.
3. The wireless portable game terminal of claim 1, wherein the processing unit and the transceiver are further configured to transfer speech and the game data in a packet-switched data channel of the radio connection.
4. The wireless portable game terminal of claim 1, wherein the processing unit and the transceiver are further configured to transfer the speech and the game data in a circuit-switched data channel of the radio connection.
5. The wireless portable game terminal of claim 1, wherein the radio connection comprises a Dual Transfer Mode DTM radio connection.
6. The wireless portable game terminal of claim 5, wherein the processing unit and the transceiver are further configured to transfer the game data utilizing a General Packet Radio Service Transparent Transport Protocol GTTP.
7. The wireless portable game terminal of claim 6, wherein the processing unit is further configured to check delay requirements of the game data, and to transfer the game data utilizing the GTTP, if the delay requirements meet a predetermined delay limit.

8. The wireless portable game terminal of claim 6, wherein the processing unit is further configured to check the volume of the game data, and to transfer the game data utilizing GTTP, if the volume meets a predetermined volume limit.

9. The wireless portable game terminal of claim 6, wherein the processing unit is further configured to check the block size of the game data, and to transfer the game data utilizing GTTP, if the block size meets a predetermined block size limit.

10. The wireless portable game terminal of claim 6, wherein the processing unit and the transceiver are further configured to transfer the game data utilizing a signaling resource of the DTM radio connection.

11. The wireless portable game terminal of claim 10, wherein the signaling resource comprises a Packet Flow Context PFC defined for the signaling.

12. The wireless portable game terminal of claim 5, wherein the processing unit and the transceiver are further configured to transfer the game data utilizing a gaming specific resource of the DTM radio connection.

13. The wireless portable game terminal of claim 12, wherein the gaming specific resource comprises a Packet Flow Context PFC defined by gaming specific Quality of Service attributes.

14. The wireless portable game terminal of claim 12, wherein the gaming specific resource comprises a Temporary Block Flow TBF defined by gaming specific Quality of Service attributes.

15. A method for transferring speech and game data to and from a wireless portable game terminal through a radio connection to a telecommunication system, the method comprising:

capturing speech of a user of the wireless portable game terminal;
transferring the captured speech of the user to another game terminal or to a game server through the radio connection;

processing game data in the wireless portable game terminal;
transferring the game data to and from another game terminal or a game server through a radio connection;

receiving captured speech of another user through the radio connection; and

reproducing audio part of the game data and the captured speech of the other user.

16. The method of claim 15, wherein the method further comprises: transferring the game data as in-band signaling in a speech channel of the radio connection.
17. The method of claim 15, wherein the method further comprises: transferring the speech and the game data in a packet-switched data channel of the radio connection.
18. The method of claim 15, wherein the method further comprises: transferring the speech and the game data in a circuit-switched data channel of the radio connection.
19. The method of claim 15, wherein the radio connection comprises a Dual Transfer Mode DTM radio connection.
20. The method of claim 19, wherein the method further comprises: transferring the game data utilizing a General Packet Radio Service Transparent Transport Protocol GTTP.
21. The method of claim 20, wherein the method further comprises: checking delay requirements of the game data; and transferring the game data utilizing the GTTP, if the delay requirements meet a predetermined delay limit.
22. The method of claim 20, wherein the method further comprises: checking the volume of the game data; and transferring the game data utilizing GTTP, if the volume meets a predetermined volume limit.
23. The method of claim 20, wherein the method further comprises: checking the block size of the game data; and transferring the game data utilizing GTTP, if the block size meets a predetermined block size limit.
24. The method of claim 20, wherein the method further comprises: transferring the game data utilizing a signaling resource of the DTM radio connection.
25. The method of claim 24, wherein the signaling resource comprises a Packet Flow Context PFC defined for the signaling.
26. The method of claim 19, wherein the method further comprises: transferring the game data utilizing a gaming specific resource of the DTM radio connection.

27. The method of claim 26, wherein the gaming specific resource comprises a Packet Flow Context PFC defined by gaming specific Quality of Service attributes.

28. The method of claim 26, wherein the gaming specific resource comprises a Temporary Block Flow TBF defined by gaming specific Quality of Service attributes.

29. A computer program product encoding a computer process for transferring speech and game data to and from a wireless portable game terminal through a radio connection to a telecommunication system, the process comprising:

capturing speech of a user of the wireless portable game terminal;

transferring the captured speech of the user to another game terminal or to a game server through the radio connection;

processing game data in the wireless portable game terminal;

transferring the game data to and from another game terminal or a game server through a radio connection;

receiving captured speech of another user through the radio connection; and

reproducing audio part of the game data and the captured speech of the other user.

30. A network element of a telecommunication system comprising:

a radio transceiver configured to transfer speech and game data in a radio connection; and

a processing unit coupled to the radio transceiver, configured to transfer the speech and the game data to and from a wireless portable game terminal through the radio connection.

31. The network element of claim 30, wherein the processing unit and the transceiver are further configured to transfer the game data as in-band signaling in a speech channel of the radio connection.

32. The network element of claim 30, wherein the processing unit and the transceiver are further configured to transfer speech and the game data in a packet-switched data channel of the radio connection.

33. The network element of claim 30, wherein the processing unit and the transceiver are further configured to transfer the speech and the game data in a circuit-switched data channel of the radio connection.

34. The network element of claim 30, wherein the radio connection comprises a Dual Transfer Mode DTM radio connection.

35. The network element of claim 34, wherein the processing unit and the transceiver are further configured to transfer the game data utilizing a General Packet Radio Service Transparent Transport Protocol GTTP.

36. The network element of claim 35, wherein the processing unit is further configured to check delay requirements of the game data, and to transfer the game data utilizing the GTTP, if the delay requirements meet a predetermined delay limit.

37. The network element of claim 35, wherein the processing unit is further configured to check the volume of the game data, and to transfer the game data utilizing GTTP, if the volume meets a predetermined volume limit.

38. The network element of claim 35, wherein the processing unit is further configured to check the block size of the game data, and to transfer the game data utilizing GTTP, if the block size meets a predetermined block size limit.

39. The network element of claim 35, wherein the processing unit and the transceiver are further configured to transfer the game data utilizing a signaling resource of the DTM radio connection.

40. The network element of claim 39, wherein the signaling resource comprises a Packet Flow Context PFC defined for the signaling.

41. The network element of claim 34, wherein the processing unit and the transceiver are further configured to transfer the game data utilizing a gaming specific resource of the DTM radio connection.

42. The network element of claim 41, wherein the gaming specific resource comprises a Packet Flow Context PFC defined by gaming specific Quality of Service attributes.

43. The network element of claim 41, wherein the gaming specific resource comprises a Temporary Block Flow TBF defined by gaming specific Quality of Service attributes.

44. A wireless portable game terminal comprising:

radio transceiving means for transferring speech and game data through a radio connection to a telecommunication system;

audio reproducing means for reproducing audio;

speech capturing means for capturing speech of a user of the wireless portable game terminal; and

processing means for processing the game data, for transferring the game data to and from another game terminal or a game server through the radio connection, for receiving captured speech of another user through the radio connection, for outputting audio part of the game data and the captured speech of the other user through the audio reproducing means, for capturing speech of an user with the speech capturing means, and for transferring the captured speech of the user to another game terminal or to a game server through the radio connection.